

AMENDMENTS TO THE CLAIMS:

The following claim listing will replace all previous listings of the claims:

1. (Currently amended) A method for detecting an aberrant mammary epithelial cell ~~or a predisposition to the development of an aberrant cell~~ in a subject or in a biological sample from said subject, said method comprising contacting cells or cell extracts from said subject or said biological sample with an ~~immunointeractive molecule~~ antibody specific for LIM domain only 4 (LMO4) or antigenic portion thereof, screening for the level of ~~immunointeractive molecule~~ antibody-LMO4 complex formation, comparing the level of the LMO4-~~immunointeractive molecule~~ antibody complex in the cells from said subject or said sample with the level of the LMO4-~~immunointeractive molecule~~ antibody complex in normal cells, and determining the presence of an aberrant mammary epithelial cell ~~or predisposition to the development of an aberrant cell~~ based on an elevated level of the LMO4-~~immunointeractive molecule~~ antibody complex in the cells from said subject or said sample relative to normal mammary epithelial cells.

2. (Canceled)

3. (Currently amended) A method for diagnosing the presence of an ~~aberrant cell~~ growth breast cancer ~~or the predisposition to the development of an aberrant cell growth~~ in a subject, said method comprising contacting cells or cell extracts from said subject or a biological sample from said subject with a LMO4-binding effective amount of an antibody having specificity for said LMO4 or an antigenic determinant or epitope therein, quantitatively or qualitatively determining the level of a LMO4-antibody complex, comparing the level of the LMO4-~~immunointeractive molecule~~ antibody complex in the cells from said subject or said sample with the level of the LMO4-~~immunointeractive molecule~~ antibody complex in normal cells, and determining the presence of an ~~aberrant cell~~ breast cancer ~~or predisposition to the development of an aberrant cell~~ based on an elevated level of the LMO4-~~immunointeractive molecule~~ antibody complex in the cells from said subject or said sample relative to normal cells.

4-17. (Canceled)

18. (Currently amended) The method according to claim 1 wherein said ~~immunointeractive molecule~~ antibody is selected from:

- (i) ~~an isolated immunointeractive molecule~~ antibody or an analogue thereof wherein the ~~immunointeractive molecule interacts with LMO4 or LMO4;~~
- (ii) ~~an isolated antibody wherein said antibody interacts with LMO4 or LMO4;~~
- (iii)(i) a deimmunized antibody molecule having specificity for an epitope recognized by a monoclonal antibody of LMO4 wherein said antibody is deimmunized with respect to the host into which it will be introduced;
- (iv)(ii) an isolated monoclonal antibody wherein said antibody interacts with LMO4 ~~or LMO4;~~
- (v)(iii) the monoclonal antibody secreted by hybridoma 16H2 or mutant or variant thereof;
- (vi)(iv) the monoclonal antibody secreted by hybridoma 20F8 or mutant or variant thereof.

19-21. (Canceled)

22. (Currently amended) A method of detecting, in a sample, LMO4 or fragment thereof comprising contacting the sample with an antibody specific for LMO4 or fragment thereof, detecting the level of a complex comprising said antibody and LMO4 or fragment thereof, and comparing the level of said complex in said sample with the level of complex in normal controls and determining an indication of breast cancer growth based on an elevated level of the complex in said sample relative to said normal controls.

23. (Currently amended) The method according to claim 22 wherein said antibody is selected from:

- (i) ~~an isolated antibody wherein said antibody interacts with LMO4 or LMO4;~~
- (ii)(i) a deimmunized antibody molecule having specificity for an epitope recognized by a monoclonal antibody of LMO4 wherein said antibody is deimmunized with respect to the host into which said antibody will be introduced;
- (iii)(ii) an isolated monoclonal antibody wherein said antibody interacts with LMO4 ~~or LMO4;~~
- (iv)(iii) the monoclonal antibody secreted by hybridoma 16H2;

(v)(iv) the monoclonal antibody secreted by hybridoma 20F8.

24-40. (Canceled)

41. (Currently amended) A method for detecting an aberrant mammary epithelial cell ~~or a predisposition to the development of an aberrant cell~~ in a subject or in a biological sample from said subject, said method comprising contacting cells or cell extracts from said subject or said biological sample with an antibody or fragment thereof specific for LMO4, and detecting an elevated level of LMO4 relative to a normal cell as indicative of an aberrant mammary epithelial cell.